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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/690,015	10/21/2003	Jean Marc Berthaud	FR920020058US1	4790

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IBM CORPORATION
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EXAMINER	
RUSSELL, WANDA Z	

ART UNIT	PAPER NUMBER
2616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/690,015	BERTHAUD ET AL.	
	Examiner	Art Unit	
	Wanda Z. Russell	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-10 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-10 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 21 October 2003 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. **Claims 1, 9 and 10** are objected to because of the following informalities: applicant uses "en" that is French. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. **Claims 1-4, and 7-10** are rejected under 35 U.S.C. 102(e) as being anticipated by Navas (Pub No. US 2003/0026268).

For **claim 1**, Navas teaches a method ([0016], lines 1-2) for routing (Abstract, line 1) a datagram (data, Abstract, line 2) in an IP ([0030], line 1) network, said method comprising the steps of:

receiving ([0017], lines 17-18) a datagram with a destination network address (message, [0076], line 4, and [0016]);

identifying (determine, [0076], line 9) a next hop router en route to or associated ([0076], line 1) with said destination network address; and

determining ([0215], 6th line from the end) whether or not transmission of said datagram on a link (group, [0214], lines 4-5) to said next hop router would result in a

bandwidth ([0214], 3rd and 4th line from the end) usage exceeding a bandwidth threshold ([0215], 5th line from the end) associated ([0215], last 5 lines) with said next hop router, and

if not, updating (execute and translate, [0214], 3rd line from the end, and last 6 lines) the bandwidth usage associated with said next hop router, and transmitting (perform routing duties for packets, [0217], lines 6-7) said datagram to said next hop router,

if so, selecting ([0215], last 5 lines) among other possible next hop routers en route to or associated with said destination address, another next hop router for which transmission of said datagram on a link to said other next hop router would not result in a bandwidth usage exceeding a bandwidth threshold associated with said other next hop router, updating (execute and translate, [0214], 3rd line from the end, and last 6 lines) the bandwidth usage associated with said other next hop router, and transmitting (perform routing duties for packets, [0217], lines 6-7) said datagram to said other next hop router.

For **claim 2**, Navas teaches the method as set forth in claim 1, wherein the step of selecting comprises the steps of:

if, among said other possible next hop routers, there is no other next hop router for which the transmission of the datagram on the respective link would result in the bandwidth usage being less than the respective bandwidth threshold, then choosing among said other possible next hop routers, another next hop router, updating (execute and translate, [0214], 3rd line from the end, and last 6 lines) the bandwidth threshold

associated with said other, chosen next hop router with a larger, predefined bandwidth threshold; and transmitting (perform routing duties for packets, [0217], lines 6-7) the datagram to said other, chosen next hop router ([0214], last 6 lines).

For **claim 3**, Navas teaches the method as set forth in claim 1 wherein the step of determining, comprises the step of adding (divided, [0215], 4th line from the end) a bandwidth usage associated with said next hop router immediately before transmission of said datagram on said link to said next hop router to a bandwidth usage required for transmission of said datagram on said link to said next hop router, and comparing (after the group is divided, check if the minimum node number threshold is exceeded, [0215], last 5 lines) a result of said adding step to the bandwidth threshold associated with said next hop router.

For **claim 4**, Navas teaches the method as set forth in claim 1 wherein the step of updating the bandwidth usage associated with the first said next hop router, comprises the step of updating in a table ([0214], last line), the current bandwidth usage with the estimated bandwidth usage.

For **claim 7**, Navas teaches the method as set forth in claim 2 , wherein the step of choosing among said other possible next hop routers, comprises the step of choosing among said other possible next hop routers, a next hop router according to a shortest path algorithm ([0070], 6th line from the end).

For **claim 8**, Navas teaches the method as set forth in claim 1, wherein a bandwidth usage of a link to said next hop router is based on other datagrams that have

been transmitted on said link within a time period prior to a current time ([0070], lines 7-9).

For **claim 9**, it is a means claim corresponding to method claim 1, therefore it is rejected for the same reason above. See 105, 135 in Fig. 3.

For **claim 10**, it is a computer program product claim corresponding to method claim 1, therefore it is rejected for the same reason above.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. **Claims 5 and 6** are rejected under 35 U.S.C. 103(a) as being unpatentable over Navas (Pub No. US 2003/0026268), further in view of Liron (U.S. Patent 6,084,864).

For **claim 5**, Navas teaches everything claimed as applied above (see claim 1). However, Navas fails to specifically teach the method as set forth in claim 1 wherein said step of determining comprises the steps of: determining a current time; retrieving from a table, a minimum time to emit a next datagram; and comparing a current time with said minimum time to emit a next datagram.

Liron teaches the method as set forth in claim 1 wherein said step of determining comprises the steps of:

determining (col. 32, lines 48-49) a current time;

retrieving (col. 26, line 17) from a table, a minimum time to emit (col. 26, lines 29-31) a next datagram; and

comparing (col. 26, lines 22-25) a current time with said minimum time to emit a next datagram.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine [Navas] with [Liron] to obtain the invention as specified to insure the best overall traffic management of the network.

For **claim 6**, Navas teaches everything claimed as applied above (see claim 1). However, Navas fails to specifically teach the method as set forth in claim 1, wherein the step of updating the bandwidth usage associated with said next hop router, comprises the steps of: computing a new minimum time to emit a next datagram based on a minimum time to emit a next datagram plus a size of the datagram to transmit divided by the bandwidth threshold of the link to said next hop router.

Liron teaches the method as set forth in claim 1, wherein the step of updating the bandwidth usage associated with said next hop router, comprises the steps of: computing (reflect the changes, col. 26, lines 51-52) a new minimum time to emit a next datagram based on a minimum time to emit a next datagram plus a size of the datagram to transmit divided by the bandwidth threshold of the link to said next hop router.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine [Navas] with [Liron] to obtain the invention as specified to insure the best overall traffic management of the network.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wanda Z. Russell whose telephone number is (571) 270-1796. The examiner can normally be reached on Monday-Thursday 9:00-6:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Seema S. Rao 6/22/07
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